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EXAMINER

FIALKOWSKI, MICHAEL R

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/590,596	Applicant(s) GOBARA ET AL.	
	Examiner MICHAEL FIALKOWSKI	Art Unit 2466	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,9,11 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,9,11 and 13-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to amendments filed August 13, 2009. Claims 1,2,4-7,9,11,13-16 are pending with Claims 3,8,10, and 12 having been cancelled and Claims 13-16 newly presented.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 14, Applicant recites starting on line 5 of the claim, "so that communication between the information-processing device at the communication source and the information-processing device at the communication destination bypassing the server is established." "The server" lacks antecedent basis in the claim and also in Claims 1 and 2. Further, it is unclear and indefinite from the claims where the server is in the claimed "device", or what function the server performs, such that communication between the source and destination bypasses a server.

Re claim 16, Applicant recites starting on line 6 of the claim, "establishing communication between the information-processing device at the communication source and the information-processing device at the communication destination

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bypassing the server" "The server" lacks antecedent basis in the claim and also in Claim 11. Further, it is unclear and indefinite from the claims where the server is in the claimed method, or what function the server performs, such that communication between the source and destination bypasses a server.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-7, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Aggarwal et al (5,675,741).

Re claim 1, Aggarwal et al discloses an information-processing device at a communication source (querying node), that communicates with an information-processing device at a communication destination (destination) through a communication control device (for example, CPU can access a network [col. 4, lines 60-65]) at the communication source, comprising:

a relay node counter (for example, how_far_is_source [col. 6, lines 55-68]) that counts a number of relay nodes (for example, 3) from the information-processing device at the communication source (querying node) to a relay node (for example r1, [col. 6, lines 59-65] which is a router/gateway over the internet [col. 1, lines 10-17]) relaying

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packets from a global address to an another global address (intermediate devices send ICMP messages back to querying node and record IP addresses [col. 3, lines 10-15]);

a span of packet life setting part (incremental TTL value program [col. 5, lines 50-55]) that sets a span of packet life in a range in which a bubble packet (UDP probe packet [col. 3, lines 63-67]) transmitted from the information-processing device at the communication source (for example, general purpose computer [col. 4, lines 60-65]) in order to leave a transmission history (record IP address in path list [col. 4, lines 10-15]) in the communication control device at the communication source, so that the bubble packet can reach the relay node relaying the packets from the global address to the another global address, based on the number of relay nodes counted by the relay node counter (curr_ttl is a variable stored that gives the number of relay nodes [col. 5, lines 33-38 & 43-46]); and

a bubble packet transmitter that transmits a bubble packet (for example, socket sends UDP packets out [col. 3, lines 55-60]) having a span of packet life that the span of packet life setting part has set [col. 3, lines 60-66], through the communication control device at the communication source.

Re claim 2, Aggarwal et al discloses the information-processing device wherein communication between the information-processing device at the communication destination and the information-processing device at the communication source is performed through a communication control device at the communication destination (destination node is capable of sending PORT_UNREACHABLE message and thus capable of providing communication control [col. 4, lines 20-26]) ; and

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wherein the span of packet life setting part sets a span of packet life in a range in which a bubble packet does not reach the communication control device at the communication destination (for example, message is received from an intermediate node indicating TTL_EXCEEDED [col. 4, lines 10-15]).

Re claim 4, Aggarwal et al discloses the information-processing device wherein the span of packet life setting part sets a span of packet life so that the bubble packet can reach a relay node closest (In Figure 1, r1 is adjacent to the querying node) to the information-processing device at the communication source (for example, a TTL =1 , r1 will send the ttl_exceeded ICMP message [col. 6, lines 59-63]), out of relay nodes that relay packets from a global address to another global address.

Re claim 5, Aggarwal et al discloses the information-processing device wherein the span of packet life setting part sets a span of packet life with increasing the number of relay nodes that the bubble packet can reach (increments the TTL by one [col. 4, lines 26-36]) , by one every time the bubble packet transmitter transmits a bubble packet (UDP probe packet) , until communication is established between the information-processing device at the communication source and the information-processing device at the communication destination (if a port_unreachable message is received, the destination has been reached [col. 4, lines 20-26]).

Re claim 6, Aggarwal et al discloses the information-processing device wherein the span of packet life setting part sets a span of packet life with which the bubble packet can reach a relay node located before the communication control device at the

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communication destination (for example, r5 (shown before the destination in Figure 1) is located with a time to live = 6, [col. 7, lines 5-10].

Re claim 7, Aggarwal et al discloses the information-processing device wherein the span of packet life setting part sets a TTL (Time To Live) for the bubble packet [col. 3, lines 63-66].

Re claim 9, Aggarwal et al discloses the information-processing device wherein the relay node counter counts the number of relay nodes with trace route (for example, determines a tracing a route from any source to any destination [col. 2, lines 21-26]).

Re claim 11, Aggarwal discloses a method of transmitting a bubble packet in an information-processing device at a communication source (querying node) that communicates with an information-processing device at a communication destination (destination) through a communication control device at the communication source (for example, CPU can access a network [col. 4, lines 60-65]), comprising:

counting (for example, how_far_is_source [col. 6, lines 55-68]), a number of relay nodes (for example, 3) from the information-processing device at the communication source (querying node) to a relay node (for example r1, [col. 6, lines 59-65] which is a router/gateway over the internet [col. 1, lines 10-17]) relaying packets from a global address to an another global address (intermediate devices send ICMP messages back to querying node and record IP addresses [col. 4, lines 10-15]);

setting, a span of packet life (incremental TTL value program [col. 5, lines 50-55]) of a bubble packet (UDP probe packet [col. 3, lines 63-67]) transmitted from the information-processing device at the communication source in order to leave a

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transmission history (record IP address in path list [col. 4, lines 10-15]) in the communication control device at the communication source, so that the bubble packet can reach the relay node relaying the packets from the global address to the another global address, based on the number of relay nodes counted by the counting step (curr_ttl is a variable stored that gives the number of relay nodes [col. 5, lines 33-38 & 43-46]); and

transmitting a bubble packet that transmits a bubble packet (for example, socket sends UDP packets out [col. 3, lines 55-60]) having a span of packet life that the span of packet life setting part has set [col. 3, lines 60-66], through the communication control device at the communication source.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al in view of Read (2004/0028035).

Re claims 13 and 15, Aggarwal et al discloses the device and method according to claims 1 and 11 as stated above, but does not explicitly disclose transmitting, by a communication control unit, a port-detecting packet for notifying a server which intermediates communication to the information-processing device at the communication destination, of a global IP address and a port number through which the bubble packet transmitted from the information-processing device at the communication source passed the communication control device at the communication source. However, Read teaches of transmitting, by a communication control unit (for example, a proxy interface agent [0108]), a port-detecting packet (a probe packet) for notifying a server (external server) which intermediates communication to the information-processing device at the communication destination (for, example, forwards to/from the destination system [0108]), of a global IP address and a port number (IP source and port [0108]) through which the bubble packet transmitted from the information-processing device at the communication source passed the communication control device at the communication source (uses the same address as the subsequent UDP packets). It would have been obvious for one of ordinary skill in the art at the time of the invention to include a port-detecting packet as taught by Read in the method and device

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of Aggarwal et al in order to reduce bandwidth and to use less UDP connections (Read [0108]).

8. Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aggarwal et al in view of Bector et al (6,687,732).

Re claims 14 and 16, Aggarwal et al discloses the device and method according to claims 2 and 11 as stated above, and further discloses, receiving, by a communication control unit (for example, processor for running a program and sending/receiving SNMP queries [col. 3, lines 1-10]), a reply packet (for example, a PORT_UNREACHABLE message [col. 4, lines 20-26]) from the information-processing device at the communication destination (from the destination) to which the global IP address and the port number of the information-processing device at the communication source is notified (the packets have the destination field with the destination IP address [col. 2, lines 35-46] and an unused port number [col. 6, lines 55-60]); but does not explicitly disclose establishing communication between the information-processing device at the communication source and the information-processing device at the communication destination bypassing the server. However, Bector et al teaches of establishing communication between a information-processing device at the communication source and a information-processing device at the communication destination bypassing a server (Abstract and [col. 7, lines 8-20]). It would have been obvious for one of ordinary skill in the art at the time of the invention to communicate between a source and destination bypassing a server as taught by Bector et al in the

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device and method of Aggarwal et al in order to efficiently transmit between a source and a destination and decrease unnecessary server traffic (Bector et al Abstract and col. 7, lines 8-20).

Response to Arguments

9. Applicant's arguments filed August 13, 2009 have been fully considered but they are not persuasive.

Applicants have asserted that Aggarwal does not disclose the bubble packets transmitted in order to leave a transmission history in the communication control device at the communication source and “a span of packet life setting part that sets a span of packet life ... so that the bubble packet can reach the relay node relaying packets from the global address to the another global address”. Examiner respectfully disagrees.

First, Aggarwal fully discloses transmitting bubble packets (which Aggarwal discloses as a UDP probe packet [col. 3, lines 63-67] which accomplishes the claimed function of leaving a transmission history in the communication control device at the communication source (where the transmission history is a recording of IP addresses in the path between a source and destination [col. 4, lines 10-15]).

Further, Aggarwal discloses “a span of packet life setting part that sets a span of packet life ... so that the bubble packet can reach the relay node relaying packets from the global address to the another global address”. For example, the span of packet life setting part that sets a span of packet life is accomplished by an incremental TTL value program [col. 5, lines 50-55]). Note that this accomplishes substantially the same

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purpose of the claimed invention as further detailed in Claim 7. This span of packet life is used so that the bubble packet can reach a relay node (for example r1, [col. 6, lines 59-65] which is a router/gateway over the internet [col. 1, lines 10-17]) which relays packets from the global address to the another global address (intermediate devices send ICMP messages back to querying node [col. 4, lines 10-15]).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL FIALKOWSKI whose telephone number is (571)270-5425. The examiner can normally be reached on Monday - Friday 10:30am-7pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571)272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. F./
Examiner, Art Unit 2466

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2466